

CDM

Project Name: Libby Asbestos Site Planning
 Project Code: 2603.018.206.RESID
 Estimated average property removal and restoration costs

By: B. Cotton 11/15/2002
 Ck:

SDMS Document ID



2031524

Average Property Remediation Cost

	Kuo Cost	CDM Cost	Total Cost	Proportion	Incremental Cost
Exterior Removal and Restoration	\$ 139,657	\$ 40,079	\$ 179,736	67%	\$ 120,423
Interior Removal and Restoration	\$ 146,178	\$ 39,210	\$ 185,388	13%	\$ 24,100
Exterior & Interior Removal and Restoration	\$ 266,702	\$ 78,043	\$ 342,745	20%	\$ 68,549
TOTAL					\$ 213,073

**ADMINISTRATIVE
 RECORD**

Funding Forecast: Project Life -

	2002	2003	2004	2005	2006
Properties Cleaned	14	200	300	300	200
Cumulative Properties Cleaned	20	220	520	820	1020
Remediation Cost per Average Property	\$ 213,100	\$ 106,600	\$ 80,000	\$ 72,000	\$ 72,000
Funding Needed	\$ 2,983,400	\$ 21,320,000	\$ 24,000,000	\$ 21,600,000	\$ 14,400,000
Cumulative Funding Needed	\$ 2,983,400	\$ 24,303,400	\$ 48,303,400	\$ 69,903,400	\$ 84,303,400

Estimated efficiencies

2003 vs 2002	50%
2004 vs 2003	75%
2005 vs 2004	90%
2006 vs 2005	none

Funding Forecast: 2002 - 2003

	2002 Cost	Projected Cost
Exterior only	\$ 179,736	\$ 179,736
Interior only	\$ 185,388	\$ 185,388
Exterior and Interior	\$ 342,745	\$ 342,745

	October	November	December	January	February	March	Total
Exterior Properties Cleaned	0	5	0	0	0	0	5
Interior Properties Cleaned	0	1	4	2	3	6	7
Exterior & Interior Properties Cleaned	0	0	0	0	0	0	0
Funding Needed	\$ -	\$ 1,084,070	\$ 741,552	\$ 370,776	\$ 556,164	\$ 1,112,329	\$ 3,864,892
Cumulative Funding Needed	\$ -	\$ 1,084,070	\$ 1,825,623	\$ 2,196,399	\$ 2,752,563	\$ 3,864,892	\$ 3,864,892

Funding Forecast: 2003 - 2004

	Properties	2002 Cost	Projected Cost
Total	200		
Exterior only	134	\$ 179,736	\$ 89,868
Interior only	26	\$ 185,388	\$ 92,694
Exterior and Interior	40	\$ 342,745	\$ 171,373

	Q4	Q1	Q2	Q3	Total
Exterior Properties Cleaned	10	10	57	57	134
Interior Properties Cleaned	6	6	7	7	26
Exterior & Interior Properties Cleaned	4	4	16	16	40
Funding Needed	\$ 2,140,337	\$ 2,140,337	\$ 8,513,310	\$ 8,513,310	\$ 21,307,296
Cumulative Funding Needed	\$ 2,140,337	\$ 4,280,675	\$ 12,793,985	\$ 21,307,296	\$ 21,307,296

CDM

Project Name: Libby Asbestos Site Planning
 Project Code: 2603.018.206.RESID
 Estimated average residential removal and restoration costs

By: B. Cotton 11/4/2002
 Ck:

Typical Exterior Removal & Restoration

Item	Rate	Cost	Comments
Exterior Removal	\$ 30,961	\$ 30,961	Average of Temple, Westfall and Spencer properties
Exterior Restoration	\$ 37,529	\$ 37,529	Average of Temple, Westfall and Spencer properties
PM/ Supervision	14.5%	\$ 16,334	
Admin & Support	11.6%	\$ 13,067	
Setup	5.0%	\$ 5,633	
T&D	5.5%	\$ 6,196	
Security	2.6%	\$ 2,929	
Subtotal		\$ 112,650	
G&A	14.0%	\$ 15,771	
Subtotal		\$ 128,421	
Fee	8.75%	\$ 11,237	
TOTAL		\$ 139,657	

Typical Interior Removal and Restoration

Item	Rate	Cost	Comments
Interior Removal/Rest.	\$ 71,689	\$ 71,689	Average of Hoff and Sanderson properties
PM/ Supervision	14.5%	\$ 17,097	
Admin & Support	11.6%	\$ 13,677	
Setup	5.0%	\$ 5,895	
T&D	5.5%	\$ 6,485	
Security	2.6%	\$ 3,066	
Subtotal		\$ 117,909	
G&A	14.0%	\$ 16,507	
Subtotal		\$ 134,417	
Fee	8.75%	\$ 11,761	
TOTAL		\$ 146,178	

Typical Interior and Exterior Removal and Restoration

Item	Rate	Cost	Comments
Exterior Removal	\$ 26,124	\$ 26,124	Average of Hoff and Sanderson properties
Exterior Restoration	\$ 32,983	\$ 32,983	Average of Hoff and Sanderson properties
Interior Removal/Rest.	\$ 71,689	\$ 71,689	Average of Hoff and Sanderson properties
PM/ Supervision	14.5%	\$ 31,193	
Admin & Support	11.6%	\$ 24,955	
Setup	5.0%	\$ 10,756	
T&D	5.5%	\$ 11,832	
Security	2.6%	\$ 5,593	
Subtotal		\$ 215,126	
G&A	14.0%	\$ 30,118	
Subtotal		\$ 245,244	
Fee	8.75%	\$ 21,459	
TOTAL		\$ 266,702	

CDM

Project Name: Libby Asbestos Site Planning

Project Code: 2603.018.206.RESID

Estimated average residential removal and restoration costs

By: B. Cotton

11/4/2002

Ck:

Site	PM & Supervision	General Admin & Office Support	Setup	Exterior Removal	Interior Removal	Exterior Restoration	Trucking & Disposal	Security	Other	Additional	Subtotal	Total
Hoff	\$ 21,862	\$ 17,174	\$ 6,776	\$ 8,589	\$ 65,362	\$ 12,849	\$ 6,638	\$ 4,777		\$ 5,803	\$ 143,827	\$ 178,310
Champion Haul F	\$ 9,213	\$ 7,350	\$ 3,215	\$ 21,462		\$ 10,688	\$ 9,075	\$ 1,350		\$ 2,249	\$ 62,352	\$ 77,301
Tempel	\$ 27,679	\$ 22,021	\$ 4,606	\$ 41,121		\$ 83,118	\$ 7,500	\$ 4,380			\$ 190,425	\$ 236,079
Westfall	\$ 19,094	\$ 15,439	\$ 26,936	\$ 33,795		\$ 21,477	\$ 7,256	\$ 7,590			\$ 131,587	\$ 163,135
Spencer	\$ 6,567	\$ 5,225	\$ 2,112	\$ 17,968		\$ 7,993	\$ 3,225	\$ 840		\$ 6,707	\$ 43,930	\$ 54,462
Sanderson	\$ 40,029	\$ 31,855	\$ 10,617	\$ 43,659	\$ 78,016	\$ 53,318	\$ 6,844	\$ 10,500			\$ 274,838	\$ 340,731
Rainy Creek Rd.	\$ 31,898	\$ 25,385							\$ 209,853		\$ 267,136	\$ 331,182
Total	\$ 156,342	\$ 124,450	\$ 54,261	\$ 166,595	\$ 143,378	\$ 189,243	\$ 40,538	\$ 29,437	\$ 209,853	\$ 14,759	\$ 1,114,096	\$ 1,381,200

Site	PM & Supervision	General Admin & Office Support	Setup	Exterior Removal	Interior Removal	Exterior Restoration	Trucking & Disposal	Security	Other	Additional	Subtotal	Total
Hoff	15.2%	11.9%	4.7%	6.0%	45.4%	8.8%	4.6%	3.3%		4.0%	100.0%	124.0%
Champion Haul F	14.8%	11.8%	5.2%	34.4%		17.1%	14.6%	2.2%		3.6%	100.0%	124.0%
Tempel	14.5%	11.6%	2.4%	21.6%		43.6%	3.9%	2.3%			100.0%	124.0%
Westfall	14.5%	11.7%	20.5%	25.7%		16.3%	5.5%	5.8%			100.0%	124.0%
Spencer	14.9%	11.9%	4.8%	40.9%		18.2%	7.3%	1.9%		15.3%	100.0%	124.0%
Sanderson	14.6%	11.6%	3.9%	15.9%	28.4%	19.4%	2.5%	3.8%			100.0%	124.0%
Rainy Creek Rd.	11.9%	9.5%							78.6%		100.0%	124.0%
Total	14.0%	11.2%	4.9%	15.0%	12.9%	17.0%	3.6%	2.6%	18.8%	1.3%		

CDM

Project Name: Libby Asbestos Site
Project Code: 2603.018.206.RESID

By: B. Cotton 11/4/2002
Ck:

Estimated average residential removal and restoration costs

Objective -

Estimate removal and restoration costs for an average property in Libby for use in planning and funding discussions.

Method -

The cost for removal and restoration are estimated as follows:

1. Kuo cost data for each removal is summarized by task and the relative cost of each task as compared to total cost is calculated.
2. Average costs for three types of residential removals are calculated:
 - a. Exterior removal and restoration
 - b. Interior removal and restoration
 - c. Exterior and interior removal and restoration
- Costs are developed by estimating the average cost of each task then scaling up the costs based on the relative costs of additional tasks calculated in 1.
4. CDM costs are estimated for the same three types of removals (separate calculation).
5. CDM and Kuo costs are combined and an overall average cost is calculated using a weighted average of the three types of removals.

Assumptions -

The following major assumptions have been made to make this estimate.

1. The relative cost as compared to the total cost for each of the following tasks is as follows:

PM/ Supervision	14.5%
Admin & Support	11.6%
Setup	5.0%
T&D	5.5%
Security	2.6%
2. Average removal costs are represented by the following removals.
 - Exterior - average of Temple, Westfall and Spencer properties
 - Interior - average of Hoff and Sanderson properties
 - Exterior and interior - average of Hoff and Sanderson properties
3. The relative proportions of properties are as follows:
 - Exterior - 67%
 - Interior - 13%
 - Exterior and interior - 20%

Calculations -

Calculations are provided in the attached tables.